What is claimed is:

1. A method for defect compensation in a color image sensor having pixels, the method comprising the steps of:
   predetermining a first and second threshold, and defining a window;
   identifying peak and normal pixels, wherein the peak is one of the pixels that has a color difference larger than the first threshold from two adjacent pixels of the same color, and the normal pixels are those other than the peak;
   identifying the peak as a defect if each of the two pixels immediately adjacent to the peak has a color difference smaller than the second threshold from two adjacent pixels of the same color, and all the other pixels in the window positioned according to the location of the peak are normal pixels; and
   correcting a color value of the defect.

2. The method as claimed in claim 1 further comprising the step of:
   storing a plurality of data bits, each of which indicates one peak and one normal pixel.

3. The method as claimed in claim 1, wherein the pixels are red, blue and green.

4. The method as claimed in claim 1, wherein the pixels are red, yellow and cyan.

1   5.   The method as claimed in claim 1, wherein the
2   color image sensor is a CMOS sensor.

1   6.   The method as claimed in claim 1, wherein the
2   color value of the defect is corrected as a mean of the
3   color values of two adjacent pixels of the same color.

1   7.   The method as claimed in claim 1, wherein the
2   first and second threshold, and the window are programmable.

1   8.   An apparatus for defect compensation in a color
2   image sensor having pixels, the apparatus comprising:
3   a memory device; and
4   a processor implementing the steps of:
5   predetermining a first and second threshold, and
6   defining a window;
7   identifying peak and normal pixels, wherein the
8   peak is one of the pixels that has a color
9   difference larger than the first threshold
10   from two adjacent pixels of the same color,
11   and the normal pixels are those other than
12   the peak;
13   storing a plurality of data bits in the memory
14   device, wherein each of the data bits
15   indicates one peak and one normal pixel;
16   identifying the peak as a defect if each of the
17   two pixels immediately adjacent to the peak
18   has a color difference smaller than the
19   second threshold from two adjacent pixels of
20   the same color, and all the other pixels in

21   the window positioned according to the
22   location of the peak are normal pixels; and
23   correcting a color value of the defect.

1   9.   The apparatus as claimed in claim 8, wherein the
2 pixels are red, blue, and green.

1   10.   The apparatus as claimed in claim 8, wherein the
2 pixels are red, yellow, and cyan.

1   11.   The apparatus as claimed in claim 8, wherein the
2 color image sensor is a CMOS sensor.

1   12.   The apparatus as claimed in claim 8, wherein the
2 color value of the defect is corrected as a mean of the
3 color values of two adjacent pixels of the same color.

1   13.   The apparatus as claimed in claim 8, wherein the
2 first and second threshold, and the window are programmable.

1   14.   A method for defect compensation in an image
2 sensor having pixels, the method comprising the steps of:
3   predetermining a first and second threshold, and
4   defining a window;
5   identifying peak and normal pixels, wherein the peak is
6   one of the pixels that has differences larger
7   than the first threshold from two adjacent
8   pixels, and the normal pixels are those other
9   than the peak;
10   identifying the peak as a defect if each of the two
11   pixels adjacent to the peak has differences
12   smaller than the second threshold from two

13   adjacent pixels, and all the other pixels in the

14   window positioned according to the location of

15   the peak are normal pixels; and

16   correcting a value of the defect.

1   15. The method as claimed in claim 14 further

2 comprising the step of:

3   storing a plurality of data bits, each of which

4   indicates one peak and one normal pixel.

1   16. The method as claimed in claim 14, wherein the

2 image sensor is a CMOS sensor.

1   17. The method as claimed in claim 14, wherein the

2 value of the defect is corrected as a mean of the values of

3 two adjacent pixels.

1   18. The method as claimed in claim 14, wherein the

2 first and second threshold, and the window are programmable.